No. 200600211

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Virginia Tech Intellectual Properties, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE , OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Armor 3015'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this fifth day of July, in the year two thousand and six.*

Attest:

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Secretary of Agriculture

REPRODUCE LOCALLY. *Include form number and date on all reproductions*

Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER
Virginia Tech Intellectual Properties, Inc.

2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME
VA99W-73

3. VARIETY NAME
Armor 3015

4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)*
Virginia Tech Intellectual Properties, Inc.
2200 Kraft Drive, Suite 1050
Blacksburg, VA 24060

5. TELEPHONE *(include area code)*
540-951-9374

6. FAX *(include area code)*
540-951-5292

FOR OFFICIAL USE ONLY

PVPO NUMBER
2006 00211

FILING DATE
MAY 15, 2006

7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION *(corporation, partnership, association, etc.)*
Corporation

8. IF INCORPORATED, GIVE STATE OF INCORPORATION
Virginia

9. DATE OF INCORPORATION
June 20, 1985

10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. *(First person listed will receive all papers)*

Carl A. Griffey
Crop and Soil Environmental Sciences
Virginia Tech
Blacksburg, VA 24061-0404

FEES RECEIVED

FILING AND EXAMINATION FEES:
$ 4,382.00
DATE 5/15/06

CERTIFICATION FEE:
$ 768.00
DATE 6/12/2006

11. TELEPHONE *(Include area code)*
540-231-9789

12. FAX *(Include area code)*
540-231-3431

13. E-MAIL
Cgriffey@vt.edu

14. CROP KIND *(Common Name)*
Wheat, Common

15. GENUS AND SPECIES NAME OF CROP
Triticum aestivum

16. FAMILY NAME *(Botanical)*
Triticeae

17. IS THE VARIETY A FIRST GENERATION HYBRID?
☐ YES X NO

18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)

a. X Exhibit A. Origin and Breeding History of the Variety
b. X Exhibit B. Statement of Distinctness
c. X Exhibit C. Objective Description of Variety
d. X Exhibit D. Additional Description of the Variety *(Optional)*
e. X Exhibit E. Statement of the Basis of the Owner's Ownership
f. X Voucher Sample *(2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository)*
g. X Filing and Examination Fee ($2,705), made payable to "Treasurer of the United States" *(Mail to the Plant Variety Protection Office)*

19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? *See Section 83(a) of the Plant Variety Protection Act)*
X YES *(If "yes", answer items 20 and 21 below)* ☐ NO *(If "no", go to item 22)*

20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? X YES ☐ NO
IF YES, WHICH CLASSES? X FOUNDATION X REGISTERED X CERTIFIED

21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES X NO
IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS.
☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED
(If additional explanation is necessary, please use the space indicated on the reverse.)

22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES?
X YES October 2005 ☐ NO
IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. *(Please use space indicated on reverse.)*

23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT *(PLANT BREEDER'S RIGHT OR PATENT)*?
☐ YES X NO
IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. *(Please use space indicated on reverse.)*

24. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER
Mark S. Coburn

NAME *(Please print or type)*
MARK S. COBURN

CAPACITY OR TITLE
EXECUTIVE VICE PRESIDENT

DATE
5/5/06

SIGNATURE OF OWNER

NAME *(Please print or type)*

CAPACITY OR TITLE

DATE

1

INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be **received** in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to **reproduce** the variety, or for tuber reproduced varieties verification that a viable *(in the sense that it will reproduce an entire plant)* tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for $2,705 ($320 filing fee and $2,385 examination fee), payable to "Treasurer of the United States" *(See Section 97.6 of the Regulations and Rules of Practice.)* Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of $320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office
Telephone: (301) 504-5518
FAX: (301) 504-5291
Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

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ITEM

18a. Give:
(1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified

18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:

(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.

18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.

18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, *etc.*

18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.

19. If "Yes" is specified *(seed of this variety be sold by variety name only, as a class of certified seed)*, the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. *(See Regulations and Rules of Practice, Section 97.103).*

22. *See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.*

23. *See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.*

21. CONTINUED FROM FRONT *(Please provide a statement as to the limitation and sequence of generations that may be certified.)*

22. CONTINUED FROM FRONT *(Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)*

A limited amount of Certified Seed of Armor 3015 was sold in the U.S.A. for the first time in October 2005.

23. CONTINUED FROM FRONT *(Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)*

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. *(See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)*

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. http://www.ams.usda.gov/lsg/seed.htm

18A. Exhibit A: Origin and Breeding History

Genealogy and Breeding Method. Wheat variety Armor 3015, formerly designated VA99W-73, was derived from the cross Pioneer Brand '2548'// 'GA-Andy'/VA90-21-20. The parentage of VA90-21-20 is 79IWWRN#67 ('Mironovskaya'/'Bezostaya 1') // 'Coker 65-20'/ 'Arthur'. Experimental line 79IWWRN#67 was selected as a parent from the 1978-1979 USDA-ARS International Winter Wheat Rust Nursery. The cross from which Armor 3015 was derived was completed in spring 1991, and the F_1 generation was grown in the field as a single 4ft headrow in 1992 to produce F_2 seed. The population was advanced from the F_2 to F_6 generation using a modified bulk breeding method.

Population Advancement and Selection of the Variety. Wheat spikes were selected from the population in each segregating generation (F_2-F_5) on the basis of absence of obvious disease, relatively early maturity, moderately short straw and desirable head shape and size. Selected spikes were threshed in bulk, and the seed was planted in 225ft^2 blocks in the fall of each year. Spikes selected from the F_6 bulk where threshed individually and planted in separate 4ft headrows in 1997. Armor 3015 was derived as a bulk of one of these F_7 headrows selected in 1998. Armor 3015 was tested as entry 73 in non-replicated observation tests in 1999 and was formerly designated VA99W-73. It was tested in Virginia's Preliminary Wheat Nursery in 2000 (Tables 1.0 – 1.4), and subsequently in exclusive yield trials conducted in AR, LA, MS and MO from 2001 to 2003 (Tables 2 and 3).

Multiplication and Purification. During the 2001-2002 growing season, 320 F_{10} headrows of Armor 3015 were planted and evaluated for homogeneity and trueness of type. Variant rows were removed and the remaining 256 headrows were harvested in bulk to comprise the Breeder seed. This seed was planted during fall 2002 on one acre at the VCIA Foundation Seed Farm and produced 50 bushels of Foundation seed. During fall 2003, 13 acres of Armor 3015 were planted by VCIA Foundation Seed Farm and produced approximately 1000 units of Foundation seed that was made available to seedsmen during fall 2004. While Armor 3015 has remained stable and uniform in composition through the last three generations of multiplication, the initial Breeder Seed contained the following proportion of variants: up to 1% taller plants, 1% plants having spikes with shorter awns (awnless to awnletted), and 0.1% plants having blue color at booting.

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18B. Exhibit B: Novelty Statement

Armor 3015 (Pioneer '2548'//'GA-Andy'/VA90-21-20) wheat is uniquely different from all known cultivars which it has been tested among, but is most similar to the cultivar Pioneer Brand 2580 (Pioneer '2548' SIB//Pioneer W521/Pioneer S76) on the basis of common ancestry and genetic contribution of Pioneer 2548 and a sister line in Armor 3015 and Pioneer 2580. Seedlings of Armor 3015 are resistant (infection type of ";1", on a scale of 0=R to 4=S) to leaf rust (*Puccinia triticina*) race TLGG (which has virulence for resistance genes *Lr* 1, 2a, 2c, 3, 9, 11, 18), while those of Pioneer 2580 are susceptible (IT=4). This difference in reaction of Armor 3015 versus Pioneer 2580 to race TLGG likely is due to the presence of resistance gene *Lr*10 in Armor 3015. In field trials (Tables 1.0 – 1.2), Pioneer 2580 is resistant to powdery mildew (*Blumeria graminis*), receiving scores of 1 to 2 on a 0 – 9 severity scale where 0=No mildew infection and 9=Total coverage of leaf area by pathogen. In contrast Armor 3015 received scores of 4 to 5, having only an intermediate level of resistance and is more susceptible to powdery mildew than Pioneer 2580.

REPRODUCE LOCALLY. Include form number and date on all reproductions. Form Approved - OMB No. 0581-0055

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*Triticum* spp.)

NAME OF APPLICANT(S)
Virginia Tech Intellectual Properties

ADDRESS *(Street and No. or RD No., City, State, and Zip Code)*
2200 Kraft Drive, Suite 1050
Blacksburg, VA 24060

FOR OFFICIAL USE ONLY

PVPO NUMBER
200600211

VARIETY NAME
Armor 3015

TEMPORARY OR EXPERIMENTAL DESIGNATION
VA99W-73

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the boxes below. Place a zero in the first box (e.g. [0][9] or [0][9]) when number is either 99 or less or 9 or less respectively. Data for quantitative plant characters should be based on a minimum of 100 plants. Comparative data should be determined from varieties entered in the same trial. Royal Horticultural Society or any recognized color standard may be used to determine plant colors; designate system used:_____
_____Please answer all questions for your variety; lack of response may delay progress of your application.

1. KIND:

[1]
1=Common
2=Durum
3=Club
4=Other (SPECIFY) : _____

2. VERNALIZATION:

[2]
1=Spring
2=Winter
3=Other (SPECIFY) : _____

3. COLEOPTILE ANTHOCYANIN:

[1] 1 = Absent 2 = Present

4. JUVENILE PLANT GROWTH:

[1] 1 = Prostrate 2 = Semi-erect 3 = Erect

5. PLANT COLOR (boot stage):

[2]
1 = Yellow-Green
2 = Green
3 = Blue-Green

6. FLAG LEAF (boot stage):

[1] 1 = Erect
2 = Recurved

[1] 1 = Not Twisted
2 = Twisted

[2] 1 = Wax Absent
2 = Wax Present

7. EAR EMERGENCE:

[1][2][0] Number of Days (Average)

[0][4] Number of Days Earlier Than Roane *

Same as _____ *

[0][2] Number of Days Later Than USG 3209 *

* Relative to a PVPO-Approved Commercial Variety Grown in the Same Trial

8. ANTHER COLOR:

[1] 1 = Yellow
2 = Purple

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9. PLANT HEIGHT (from soil to top of head, excluding awns):

[0][9][4] cm (Average)

[0][8] cm Taller Than Roane *

Same as _____ *

[0][5] cm Shorter Than Coker 9663 *

10. STEM:

A. ANTHOCYANIN

[1] 1= Absent
2 = Present

B. WAXY BLOOM

[2] 1 = Absent
2 = Present

C. HAIRINESS
(last internode of rachis)

[1] 1 = Absent
2 = Present

D. INTERNODE

[1] 1 = Hollow 2 = Semi-solid 3 = Solid

[3] Number of Nodes

E. PEDUNCLE

[3] 1 = Erect 2 = Recurved 3 = Semi-erect

[ ][ ] cm Length

F. AURICLE

[ ] Anthocyanin 1 = Absent 2 = Present

[ ] Hair 1 = Absent 2 = Present

11. HEAD (at Maturity):

A. DENSITY

[2] 1 = Lax
2 = Middense (Laxidense)
3 = Dense

B. SHAPE

[1] 1 = Tapering
2 = Strap
3 = Clavate
4 = Other (SPECIFY):_____

C. CURVATURE

[2] 1 = Erect
2 = Inclined
3 = Recurved

D. AWNEDNESS

[4] 1 = Awnless
2 = Apically Awnletted
3 = Awnletted
4 = Awned

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12. GLUMES (at Maturity):

A. COLOR

[2]
1 = White
2 = Tan
3 = Other (SPECIFY) : _____

B. SHOULDER

[2]
1 = Wanting 2 = Oblique
3 = Rounded 4 = Square
5 = Elevated 6 = Apiculate
7 = Other (SPECIFY):_____

C. SHOULDER WIDTH

[2]
1 = Narrow
2 = Medium
3 = Wide

D. BEAK

[3]
1 = Obtuse
2 = Acute
3 = Acuminate

E. BEAK WIDTH

[2]
1 = Narrow
2 = Medium
3 = Wide

F. GLUME LENGTH

[2]
1 = Short (ca. 7mm)
2 = Medium (ca. 8mm)
3 = Long (ca. 9mm)

G. WIDTH

[2]
1 = Narrow (ca. 3mm)
2 = Medium (ca. 3.5mm)
3 = Wide (ca. 4mm)

13. SEED

A. SHAPE

[1]
1 = Ovate
2 = Oval
3 = Elliptical

B. CHEEK

[1]
1 = Rounded
2 = Angular

C. BRUSH

[2]
1 = Short
2 = Medium
3 = Long

[1]
1 = Not Collared
2 = Collared

D. CREASE

[1]
1 = Width 60% or less of Kernel
2 = Width 80% or less of Kernel
3 = Width Nearly as Wide as Kernel

[2]
1 = Depth 20% or less of Kernel
2 = Depth 35% or less of Kernel
3 = Depth 50% or less of Kernel

E. COLOR

[3]
1 = White
2 = Amber
3 = Red
4 = Other (SPECIFY): _____

F. TEXTURE

[2]
1 = Hard
2 = Soft
3 = Other (SPECIFY): _____

G. PHENOL REACTION (*see instructions*):

[1]
1 = Ivory 4 = Dark Brown
2 = Fawn 5 = Black
3 = Light Brown

H. SEED WEIGHT

[27] g/1000 seed (Whole number only)

I. GERM SIZE

[2]
1 = Small
2 = Midsize
3 = Large

14. Disease : (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE INDICATE THE SPECIFIC RACE OR STRAIN TESTED

[1]	**Stem Rust** *(Puccinia graminis* **f. sp.** *tritici)* Race: TPMK	[3]	**Leaf Rust** *(Puccinia recondita* **f. sp.** *tritici)* Races: MCGC, MCRK
[3]	**Stripe Rust** *(Puccinia striiformis)* Race: PST 100	[0]	**Loose Smut** *(Ustilago tritici)*
[0]	**Tan Spot** *(Pyrenophora tritici-repentis)*	[0]	**Flag Smut** *(Urocystis agropyri)*
[0]	**Halo Spot** *(Selenophoma donacis)*	[0]	**Common Bunt** *(Tilletia tritici* **or** *T. laevis)*
[3]	***Septoria nodorum*** **(Glume Blotch)**	[0]	**Dwarf Bunt** *(Tilletia controversa)*
[0]	***Septoria avenae*** **(Speckled Leaf Disease)**	[0]	**Karnal Bunt** *(Tilletia indica)*
[3]	***Septoria tritici*** **(Speckled Leaf Blotch)**	[3]	**Powdery Mildew** *(Erysiphe graminis* **f. sp.** *tritici)*
[3]	**Scab (*Fusarium* spp.)**	[0]	**"Snow Molds"**
[0]	**"Black Point" (Kernel Smudge)**	[0]	**Common Root Rot** *(Fusarium, Cochliobolus* **and** *Bipolaris* **spp.)**
[3]	**Barley Yellow Dwarf Virus (BYDV)**	[0]	**Rhizoctonia Root Rot** *(Rhizoctonia solani)*
[3]	**Soilborne Mosaic Virus (SBMV)**	[0]	**Black Chaff** *(Xanthomonas campestris* **pv.** *translucens)*
[1]	**Wheat Yellow (Spindle Streak) Mosaic Virus**	[0]	**Bacterial Leaf Blight** *(Pseudomonas syringae* **pv.** *syringae)*
[0]	**Wheat Streak Mosaic Virus (WSMV)**	[ ]	**Other (SPECIFY)** _____
[ ]	**Other (SPECIFY)** _____	[ ]	**Other (SPECIFY)** _____
[ ]	**Other (SPECIFY)** _____	[ ]	**Other (SPECIFY)** _____
[ ]	**Other (SPECIFY)** _____	[ ]	**Other (SPECIFY)** _____

15. INSECT: (0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)

PLEASE SPECIFY BIOTYPE (where needed)

[1]	**Hessian Fly** *(Mayetiola destructor)* Biotypes: B,C,D,E,L	[ ]	**Other (SPECIFY)** _____
[0]	**Stem Sawfly** *(Cephus* **spp.)**	[ ]	**Other (SPECIFY)** _____
[0]	**Cereal Leaf Beetle** *(Oulema melanopa)*	[ ]	**Other (SPECIFY)** _____
[0]	**Russian Aphid** *(Diuraphis noxia)*	[ ]	**Other (SPECIFY)** _____

15. INSECT: *Continued* **(0=Not Tested; 1=Susceptible; 2=Resistant; 3=Intermediate; 4=Tolerant)**

PLEASE SPECIFY BIOTYPE (where needed)

[0]	**Greenbug *(Schizaphis graminum)***	[ ]	**Other (SPECIFY)** _____
[0]	**Aphids**	[ ]	**Other (SPECIFY)** _____

16. ADDITIONAL INFORMATION ON ANY ITEM ABOVE, OR GENERAL COMMENTS

WHEAT DESCRIPTOR ILLUSTRATIONS

Section numbers correspond to the numbers of the sections on the form.

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4 EARLY PLANT GROWTH HABIT:

1 Prostrate | 2 Intermediate | 3 Erect

10 STEM INTERNODE X-SECTION

1 Hollow | 2 Semi-Solid | 3 Solid

11 SPIKE SHAPE

1 Tapering | 2 Oblong | 3 Clavate | 4 Elliptical

11 AWNEDNESS:

1 Awnless | 2 Apically Awnleted | 3 Awnleted | 4 Awned

12 BEAK SHAPE:

1 Obtuse | 2 Acute | 3 Acuminate

12 SHOULDER SHAPE:

1 Wanting | 2 Oblique | 3 Rounded | 4 Square | 5 Elevated | 6 Apiculate

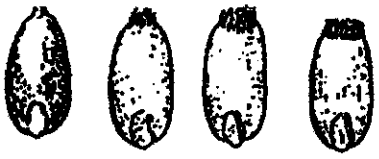
13 SEED SHAPE:

1 Ovate | 2 Oval | 3 Elliptical

13 CHEEK SHAPE:

1 Rounded | 2 Angular

13 BRUSH SIZE:



1 Small | 2 Midsized | 3 Large | Collared

13 BRUSH HAIR LENGTH

1 Short | 2 Medium | 3 Long

GERM (EMBRYO) SIZE:

1 Small | 2 Midsized | 3 Large

13 SEED CREASE WIDTH:

1 Narrow | 2 Mid-Wide | 3 Wide

13 SEED CREASE DEPTH:

1 Shallow | 2 Mid-Deep | 3 Deep

REFERENCE

Briggle, L.W. and L.P. Reitz. 1963. Classification of Triticum Species and of Wheat Varieties Grown in the United States. Technical Bulletin 1278. United States Department of Agriculture.

18D. Exhibit D: Additional Description of the Variety 2006 00211

Armor 3015 is a high yielding, moderately early heading, moderately short stature, awned soft red winter wheat with good straw strength. On the basis of data from trials conducted in Virginia, head emergence of Armor 3015 is similar to those of 'Coker 9663' and Pioneer Brands '2580' and '26R24' (VA99W-73 in Tables 1.0 – 1.4). Plant height of Armor 3015 (37 inches) is also similar to those of Pioneer Brands 2580 and 26R24 and 2 inches shorter than Coker 9663. On the basis of Belgian Lodging Score (0.2 – 10), straw strength of Armor 3015 (0.3) is good and superior to that of Coker 9663, 'USG 3209', and 'AGS 2000'. In Virginia, average grain yield of Armor 3015 (79 bu/ac) was similar to those of Coker 9663 and AGS 2000, and average test weight (56.7 lb/bu) was similar to that of Pioneer 2580 and significantly higher than that of 'FFR 555W'(Table 1.0). Winter hardiness data is not available for VA99W-73, but it likely has moderate to good winter hardiness on the basis of its parentage and known winter hardiness of a similar sister line VA96-54-372, whose winter hardiness in Ontario, Canada was equal to that of Pioneer Brand '2510'.

Armor 3015 has acceptable soft wheat milling and pastry baking quality on the basis of quality evaluations conducted by USDA-ARS Soft Wheat Quality Lab in Wooster, OH (Tables 4, 5, 6). Grain from Armor 3015 has better milling quality than that of 'Roane' and Pioneer Brand 2580, producing more flour of a softer texture. Grain of Armor 3015 has better pastry baking quality than that of Coker 9663, producing flour that is lower in protein concentration (8.2 vs 9.2%) as well as softer in texture.

On the basis of data collected in Virginia (Tables 1.0 – 1.4), Armor 3015 is moderately resistant to *barley yellow dwarf virus* and moderately resistant to moderately susceptible to powdery mildew (*Blumeria graminis*) and leaf rust (*Puccinia triticina*). It is moderately susceptible to *wheat spindle streak mosaic virus*. Reaction of Armor 3015 to other disease and insect pests prevalent outside the mid-Atlantic region has not been well characterized, but in variety evaluation trials conducted in AR, LA, MS and MO from 2001 to 2003, Armor 3015 has been noted to express moderate to intermediate levels of resistance (Scale where 0=R to 9=S scale) to stem rust (4), (*Puccinia graminis*), stripe rust (3), (*Puccinia striiformis*), *soil borne mosaic virus* (3), leaf blotch (3), (*Septoria tritici*), glume blotch (3), (*Stagonospora nodorum*), and fusarium head blight (2), (*Fusarium graminearum*). On the basis of seedling tests, Armor 3015 is susceptible to Hessian fly [*Mayetiola destructor* (Say)] biotypes B, C, D, E, and L.

Table 1.0 Summary of performance of Armor 3015 (VA99W-73) in the 1999-2000 Preliminary Wheat Yield Test over 4 locations (Warsaw, Painter, Blacksburg, VA and Plymouth, NC). Numbers below each column heading indicate the number of location upon which data are based.

Line	Yield (bu/a)	Percent of Test Mean (Yield)	Test Weight (lbs/bu)	Heading Date (March 31+)	Plant Height (in)	Lodging (0.2-10)[1]	Powdery Mildew (0-9)[2]	Powdery Mildew on 5/11/00 (0-9)	Leaf Rust (0-9)	BYDV (0-9)	Plant Height on 3/24/00 (in)[3]	Juvenile Plant Growth Habit (0-5)[4]
	4	4	4	2	2	3	2	1	2	2	1	1
VA99W-73	79.4	99.3	56.7	30	37	0.3	4	5	5	2	13	1
ROANE	83.6	104.6	59.1	34	34	0.9	3	0	4	2	10	1
CK9663	76.8	96.1	58.1	30	39	1.6	6	5	0	1	13	1
PION2580	82.7	103.4	56.5	30	37	0.6	2	2	5	2	13	1
FFR555W	60.1	75.2	55.5	35	35	0.3	8	7	7	3	12	1
PION2691	78.7	98.4	55.9	23	33	1.2	2	3	4	1	14	2
PION26R24	85.3	106.7	57.7	30	37	1.2	3	4	5	2	12	2
AGS 2000	82.0	102.6	57.7	28	37	2.2	2	3	1	1	14	2
USG3209	87.8	109.8	57.6	28	34	1.9	2	3	5	2	14	1
176 (VA99W-176)	82.9	103.7	57.7	29	37	0.5	0	0	5	2	13	1
GRAND MEAN	79.9		56.9	30	36	1.1	2	2	3	2	13	1
CV	10.0		1.4	14	4	102.3	77	50	37	91	8	33
LSD	6.2		0.6	4	1	0.9	1	1	1	2	1	1

[1] Belgian lodging scale = area x intensity x 0.2. Area is rated on a scale from 1 (plot unaffected) to 10 (entire plot affected). Intensity is rated on a scale from 1 (plants standing upright) to 5 (plants lying totally flat on the ground).

[2] All 0-9 ratings indicate relative disease severity: 0 = no disease present; 9 = total plant infection.

[3] This height measurement serves as an estimate of spring growth habit.

[4] Juvenile Plant Growth Habit: 0 = prostrate; 5 = very erect.

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Table 1.1 Performance of Armor 3015 (VA99W-73) in the 1999-2000 Preliminary Wheat Yield Test, Blacksburg, VA.

Entry	Line	Yield (bu/a)	Percent of Test Mean (Yield)	Test Weight (lbs/bu)	Heading Date (March 31+)	Plant Height (in)	Lodging (0.2-10)[1]	Powdery Mildew on 4/21/00 (0-9)[2]	Powdery Mildew on 5/11/00 (0-9)	BYDV (0-9)
16	VA99W-73	81.1	102.5	55.7	34	37	0.2	5	5	3
1	ROANE	97.0	122.6	58.0	36	35	1.5	0	0	3
2	CK9663	75.5	95.4	56.3	33	38	2.3	7	5	2
3	PION2580	85.6	108.2	55.4	34	36	0.4	1	2	3
4	FFR555W	59.1	74.7	54.1	37	35	0.4	7	7	4
5	PION2691	73.0	92.3	54.2	26	31	1.4	2	3	2
6	PION26R24	86.6	109.5	57.0	33	37	1.6	2	4	3
7	AGS 2000	76.6	96.8	56.6	32	36	2.4	2	3	3
8	USG3209	88.4	111.8	56.4	32	33	3.1	2	3	3
41	176 (VA99W-176)	83.9	106.1	57.8	34	38	0.6	0	0	3
	GRAND MEAN	79.1		56.2	33	35	1.1	1	2	3
	CV	6.7		1.1	2	3	64.2	59	50	16
	LSD	7.2		0.8	1	1	0.9	1	1	1

[1] Belgian lodging scale = area x intensity x 0.2. Area is rated on a scale from 1 (plot unaffected) to 10 (entire plot affected). Intensity is rated on a scale from 1 (plants standing upright) to 5 (plants lying totally flat on the ground).

[2] All 0-9 ratings indicate relative disease severity: 0 = no disease present; 9 = total plant infection.

Table 1.2 Performance of Armor 3015 (VA99W-73) in the 1999-2000 Preliminary Wheat Yield Test, Warsaw, VA.

Entry	Line	Yield (bu/a)	Percent of Test Mean (Yield)	Test Weight (lbs/bu)	Heading Date (March 31+)	Plant Height (in)	Lodging (0.2-10)[1]	Powdery Mildew (0-9)[2]	Leaf Rust (0-9)	BYDV (0-9)	Plant Height on 3/24/00 (in)[3]	Juvenile Plant Growth Habit (0-5)[4]
16	VA99W-73	88.3	100.3	58.6	27	38	0.5	4	5	0	13	1
1	ROANE	78.3	88.9	60.2	31	33	0.7	6	5	0	10	1
2	CK9663	76.6	87.0	60.0	27	40	1.7	5	0	0	13	1
3	PION2580	93.4	106.1	57.8	26	38	1.0	2	6	0	13	1
4	FFR555W	63.4	72.0	56.5	32	34	0.2	8	6	2	12	1
5	PION2691	87.7	99.6	57.2	21	35	1.5	2	4	0	14	2
6	PION26R24	92.6	105.2	58.8	26	38	0.9	3	5	0	12	2
7	AGS 2000	90.5	102.8	58.8	24	38	3.4	3	1	0	14	2
8	USG3209	91.3	103.7	59.2	24	35	1.9	2	6	0	14	1
41	176 (VA99W-176)	99.3	112.8	58.8	23	36	0.5	0	5	0	13	1
	GRAND MEAN	88.1		58.0	26	36	1.2	3	3	0	13	1
	CV	6.0		0.9	4	4	89.9	25	30	137	8	33
	LSD	7.2		0.7	1	2	1.5	1	1	1	1	1

[1] Belgian lodging scale = area x intensity x 0.2. Area is rated on a scale from 1 (plot unaffected) to 10 (entire plot affected). Intensity is rated on a scale from 1 (plants standing upright) to 5 (plants lying totally flat on the ground).

[2] All 0-9 ratings indicate relative disease severity: 0 = no disease present; 9 = total plant infection.

[3] This height measurement serves as an estimate of spring growth habit.

[4] Juvenile Plant Growth Habit: 0 = prostrate; 5 = very erect.

Table 1.3 Performance of Armor 3015 (VA99W-73) in the 1999-2000 Preliminary Wheat Yield Test, Painter, VA.

Entry	Line	Yield (bu/a)	Percent of Test Mean (Yield)	Test Weight (lbs/bu)	Lodging (0.2-10)[1]
16	VA99W-73	74.7	94.1	55.8	0.2
1	ROANE	80.2	101.0	59.0	0.2
2	CK9663	79.9	100.6	58.1	0.2
3	PION2580	72.7	91.5	56.2	0.2
4	FFR555W	62.0	78.1	56.1	0.2
5	PION2691	76.5	96.3	56.5	0.2
6	PION26R24	87.0	109.6	57.1	1.0
7	AGS 2000	84.1	105.9	57.8	0.2
8	USG3209	85.1	107.2	56.8	0.2
41	176 (VA99W-176)	77.8	98.0	56.6	0.2
	GRAND MEAN	79.4		56.6	0.8
	CV	7.1		0.8	133.0
	LSD	9.4		0.7	1.7

[1] Belgian lodging scale = area x intensity x 0.2. Area is rated on a scale from 1 (plot unaffected) to 10 (entire plot affected). Intensity is rated on a scale from 1 (plants standing upright) to 5 (plants lying totally flat on the ground).

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Table 1.4 Performance of Armor 3015 (VA99W-73) in the 1999-2000 Preliminary Wheat Yield Test, Plymouth, NC (1 replication).

Entry	Line	Yield (bu/a)	Test Weight (lbs/bu)	Leaf Rust (0-9)[1]	Leaf Rust Rection Type
16	VA99W-73	56.2	56.2	5	S
1	ROANE	68.9	59.3	2	R/S
2	CK9663	28.6	57.9	0	R
3	PION2580	56.1	56.1	4	MR
4	FFR555W	58.3	54.9	8	S
5	PION2691	56.1	55.8	3	R/S
6	PION26R24	60.1	57.1	4	S/R
7	AGS 2000	66.5	57.8	1	R
8	USG3209	67.0	57.7	1	R
41	176 (VA99W-176)	57.3	56.5	4	S
	Mean	57.6	57.0	3	

[1] All 0-9 ratings indicate relative disease severity: 0 = no disease present; 9 = total plant infection.

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Table 2. Yield (bu/ac) performance of VA99W-73 in JGL trials conducted in southeast from 2001 to 2003

	2001	2001	2001	2001	2001	2001	2002	2002	2002	2002	2002	2002	2003	2003	2003	2003
	MO	AR	AR	AR	MS	LA	MO	AR	AR	AR	MS	MS	AR	AR	MS	LA
VARIETY	HAY	NEW	DEW	BAY	GRE	BAT	HAY	NEW	DEW	BAY	GRE1	GRE2	NEW	DEW	GRE	BAT
% of Test Mean	**111%**	**102%**	**118%**	**123%**	**114%**	**98%**	**100%**	**125%**	**119%**	**122%**	**108%**	**121%**	**122%**	**105%**	**109%**	**109%**
VA99W-73 vs Coker 9663	**110%**	**105%**	**110%**	**126%**	**105%**	**95%**	**88%**	**143%**		**159%**	**124%**	**108%**	**133%**	**105%**	**112%**	**95%**
VA99W-73 vs Tribute		**95%**	**112%**	**119%**	**114%**		**91%**	**118%**	**102%**	**99%**	**108%**		**124%**	**121%**		
VA99W-73 vs USG 3209					**128%**										**106%**	**101%**
VA99W-73 vs McCormick		**106%**	**124%**	**108%**	**133%**	**93%**										
VA99W-73=JGL008	**56.2**	**74.9**	**77.0**	**82.0**	**90.8**	**69.6**	**55.7**	**87.6**	**80.5**	**35.7**	**65.1**	**57.8**	**99.2**	**71.8**	**94.1**	**89.7**
Coker 9663	51.0	71.5	70.0	65.1	86.5	73.6	63.0	61.1		22.5	52.4	53.5	74.8	68.7	83.6	94.9
TRIBUTE		78.5	68.9	68.7	79.9		61.0	74.3	78.9	35.9	60.0		80.2	59.3		
ROANE		68.4	68.3		73.8		47.0	60.3	71.9	16.4	59.7		78.1	72.9		
DK 9216		72.0	69.5		87.2		50.4	70.9	78.6	26.8	58.2		86.6	72.0		
PATTON		65.8	65.3		83.5			57.6	70.5				75.1	45.2		
Coker 9474		70.1	65.8					52.7	65.7				73.0	57.2		
Mason			67.4					67.1	72.0			43.4	70.1	66.6	82.8	90.8
Coker 9543			70.0						64.8					55.1		
SHILOH			63.0						65.6							
V9212	48.9	68.8	59.0		77.5			65.3	70.1							
V9301	46.5	73.5	69.3		68.2								77.9	63.4	87.6	75.6
RACHEL		78.1	78.2	78.4	81.7	79.6							86.5	64.1	88.7	84.2
AGS 2000			74.8												86.7	91.7
PION 2684				52.5	80.5	79.5							82.3	73.9	88.1	84.9
LA 422				57.3	76.2	73.3									85.7	85.8
FFR 522W					78.1										87.5	67.7
PION 26R61					86.6										97.4	87.5
USG 3209					70.8										88.9	88.9
PION 25R37								66.3	78.8				79.5	68.8		
PION 25R44								73.9					95.1	74.7		
PION 25R49								69.2					80.2	65.6		
766		68.4	70.0	60.9	73.2	84.9										
McCORMICK		70.5	62.3	76.0	68.4	75.0										
DK 7900	49.2	79.6	66.8		85.3											
TV 8555	43.4			64.5	77.5	40.4										
TV 8825	45.7			64.5	86.5											
PION 26R38													84.7	73.4	91.1	72.7
COYOTE													77.7	71.1	83.9	71.8
MO 960903													75.6	71.8	86.2	85.9
Coker 9184															76.9	72.8
LA 481															100.9	90.9
PION 25R23													74.1	77.8		
PION 25R47													93.5	81.9		
PION 25R78													87.7	73.6		
Coker 9152														75.6		
PION 26R24													68.1			
MEAN	50.6	73.1	65.2	66.7	80.0	71.3	55.9	70.3	67.8	29.2	60.2	47.9	81.0	68.1	86.7	82.1

Note: Data collected by JGL is proprietary and confidential.

Table 3. Test Weight (lb/bu) of VA99W-73 in JGL trials conducted in southeast in 2001 and 2002

	2001	2001	2001	2002	2002	2002
	AR	AR	LA	MO	AR	AR
VARIETY	NEW	DEW	BAT	HAY	NEW	DEW
% of Test Mean	**104%**	**101%**	**102%**	**94%**	**101%**	**100%**
VA99W-73 vs Coker 9663	**101%**	**98%**	**97%**	**91%**	**98%**	
VA99W-73 vs Tribute	**96%**	**95%**		**92%**	**96%**	**98%**
VA99W-73 vs Patton	**103%**	**102%**			**102%**	**102%**
VA99W-73 = JGL008	**58.1**	**55.6**	**55.7**	**48.3**	**56.8**	**58.8**
Coker 9663	57.7	56.8	57.4	53.1	57.7	
TRIBUTE	60.4	58.7		52.3	59.0	59.7
PATTON	56.2	54.6			55.6	57.5
ROANE	59.0	57.5		51.4	58.1	61.2
Coker 9474	60.7	59.4			57.3	61.6
MASON		54.7			56.5	58.8
Coker 9543		57.9				60.1
SHILOH		56.5				57.9
RACHEL	58.2	56.4	54.9			
766	56.9	56.1	57.2			
McCORMICK	59.7	57.4	56.8			
AGS 2000		56.7				
PION 2684			58.3			
LA 422			56.3			
TV 8555			53.7			
PION 25R37					56.6	60.0
PION 25R44					57.2	
PION 25R49					57.5	
MEAN	56.1	55.1	54.3	51.4	56.2	59.0

Note: Data collected by JGL is proprietary and confidential.

Table 4. Milling and baking quality of VA99W-73 in the 1998-1999 Virginia Wheat Observation Nursery

LINE	Mill Score	Bake Score	Flour Yield	Softness Equivalent	Flour Protein	Water Absorb	Gluten Strength
			%	%	%	AWRC%	(lactic acid)
Madison (Standard)	**100.0 A**	**100.0 A**	**72.7**	**47.9**	**11.00**	**53.6**	**97.1**
VA99W-73	**96.7 B**	**98.7 B**	**71.7***	**53.4**	**9.28**	**57.3***	**95.9**
Roane	93.4 C	99.2 B	70.7**	52.9	10.06	57.0*	92.9
Pocahontas	105.2 A	98.0 B	74.3	48.8	9.66	55.5	103.9
Coker 9663	93.9 C	86.2 D	70.9**	43.0*	10.74	57.7*	93.6
Pioneer 2580	94.4 C	95.5 B	71.0*	47.5	10.60	55.9	86.6
FFR 555W	102.7 A	100.9 A	73.5	49.5	9.34	54.4	88.7
Pioneer 2691	98.5 B	105.3 A	72.3	60.0	9.03	53.4	113.9
Jackson	98.3 B	101.7 A	72.2	53.5	10.23	55.5	115.9
Coker 9803	99.1 B	99.4 B	72.4	50.9	9.36	56.4*	93.2

*One standard deviation below the check variety

**Two standard deviations below the check variety

Table 5. Milling and baking quality of VA99W-73 in the 1999-2000 Virginia Preliminary Wheat Nursery

LINE	Mill Score	Bake Score	Flour Yield	Softness Equivalent	Flour Protein	Water Absorb	Gluten Strength
			%	%	%	AWRC%	(lactic acid)
FFR 555W (Standard)	**100.0 A**	**100.0 A**	**75.9**	**56.1**	**7.95**	**56.3**	**70.9**
VA99W-73	**90.6 C**	**96.3 B**	**73.0****	**61.4**	**7.07**	**61.7****	**77.8**
Roane	89.6 D	90.7 C	72.7**	56.2	8.26	62.1**	80.6
Coker 9663	90.7 C	87.9 D	73.0**	51.8*	7.70	60.6*	70.9
Pioneer 2580	87.9 D	93.9 C	72.1**	55.8	7.45	59.9*	73.9
Pioneer 2691	91.3 C	99.4 B	73.2**	59.8	8.04	59.4*	82.1
Pioneer 26R24	93.1 C	100.0 A	73.8**	58.1	8.20	57.8	87.3
AGS 2000	95.7 B	93.3 C	74.6*	55.6	8.05	60.1*	67.7
USG 3209	91.1 C	89.9 C	73.2**	55.4	7.87	62.0**	75.1

***One standard deviation below the check variety**

****Two standard deviations below the check variety**

Table 6. Milling and baking quality of VA99W-73 versus standard quality check in 2003 JGL trials

ENTRY	MILLING QUALITY SCORE		BAKING QUALITY SCORE		SOFTNESS EQUIV. SCORE		TEST WT. LB / BU	FLOUR YIELD %	SOFTNESS EQUIV. %	FLOUR PROTEIN %	SUCROSE RET'N %	LACIC ACID RET'N
STANDARD	79	B	85	A	85	A	63.7	73.6	56.4	7.2	82.1	105.8
VA99W-73 = JGL008	**74**	**B**	**79**	**B**	**78**	**B**	**62.9**	**72.0**	**53.3**	**7.4**	**83.1**	**85.4**

Note: Data provided by JGL is proprietary and confidential.

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U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE

EXHIBIT E
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued *(7 U.S.C. 2421)*. The information is held confidential until the certificate is issued *(7 U.S.C. 2426)*.

1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Virginia Tech Intellectual Properties, Inc.	VA99W-73	Armor 3015
4. ADDRESS *(Street and No., or R.F.D. No., City, State, and ZIP, and Country)*	**5. TELEPHONE** *(Include area code)*	**6. FAX** *(Include area code)*
Virginia Tech Intellectual Properties, Inc. **2200 Kraft Drive, Suite 1050** **Blacksburg, VA 24060**	540-951-9374	540-951-5292
	7. PVPO NUMBER 2006 00211	

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. **If no, please explain.** [X] **YES** [ ] **NO**

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? **If no, give name of country.** [X] **YES** [ ] **NO**

10. Is the applicant the original owner? [ ] **YES** [X] **NO** **If no, please answer one of the following:**

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?
[ ] **YES** [ ] **NO** **If no, give name of country**

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?
[X] **YES** [ ] **NO** **If no, give name of country**

11. Additional explanation on ownership *(If needed, use the reverse for extra space)*:

Original owner Virginia Polytechnic Institute and State University assigned its owernship to current owner Virginia Tech Intellectual Properties, Inc. (See attached)

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.

2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.

3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

PLANT GERMPLASM ASSIGNMENT

DISCLOSURE NO	TITLE
04.018	VA99W-176 Wheat
04.019	VA97W-375WS Wheat
04.020	VA99W-73 Wheat
04.021	VAN00W-186 Wheat
04.048	Teejay (Peanut)

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY (hereinafter referred to as the "UNIVERSITY"), assigns to VIRGINIA TECH INTELLECTUAL PROPERTIES, INC. (hereinafter referred to as "VTIP") all rights, title and interest in and to all of the above-listed GERMPLASMS as held by the UNIVERSITY.

The UNIVERSITY, by its authorized agents, agrees that it will execute all necessary assignments as requested by VTIP, to facilitate the filing of patent applications and/or copyright registrations. It will render any reasonable assistance requested to aid in preparation of such applications and/or registrations.

The UNIVERSITY shall retain the right to make use of the GERMPLASMS for internal research and other non-commercial purposes without cost to the UNIVERSITY.

All royalties, rents, payments, or any cash receipts from the sale, assignment, transfer, licensing or use of the GERMPLASMS shall be the property of VTIP and shall be distributed according to the provisions of the Virginia Agricultural Experiment Station (VAES) Plant Germplasm Release Policy (PGRP).

Prior to the execution of this Assignment, the UNIVERSITY has not granted the right of license to make, use, or sell said GERMPLASMS to anyone except to VTIP, nor has it otherwise encumbered its rights, title and interest in said GERMPLASMS, and it will not execute any instrument in conflict with this Assignment.

IN WITNESS WHEREOF, the UNIVERSITY has caused this Assignment to be signed this 4th day of June, 2004.

VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY

BY _____
MINNIS E. RIDENOUR
Chief Operating Officer

STATE OF VIRGINIA

COUNTY OF MONTGOMERY, to-wit:

The foregoing instrument was acknowledged before me this 4th day of June, 2004, by Minnie E. Ridenour of Virginia Polytechnic Institute and State University, on behalf of said University.

Gerry M. Chenault
Notary Public

My commission expires: 2/28/07